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BIOSAFETY FROM THE MAQĀṢID SHARĪ'AH VIEWS

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ABSTRACT

Most Maqāṣid Sharī'ah discussions on biosafety focus on the bioethical issues also on the usage and consumption of genetically modified organisms (GMO), this paper analyses the key biosafety issues namely the scientific and socio-economic issues in regulating biosafety with Maqāṣid Sharī'ah as a background. Recent studies in the field of Maqāṣid Sharī'ah added another higher intention of Sharī'ah which is the preservation of the environment. The discussion of the scientific aspect of biosafety examines the benefits and side effects of modern biotechnology, assessed by risk assessment and management. The socio-economic issues analyse the issues of socio-economic, religious, cultural, moral, and ethical issues. This study aims to examine the issues in biosafety and align them with the six Maqāṣid Sharī'ah aims namely the protection of property, life, religion, intellect, lineage, and environment. As this is purely doctrinal research based on the primary and secondary sources of laws and regulations, this discussed the basic understanding of the legal regulation of biosafety for better biosafety governance. This study further elaborates on the Islamic Maqāṣid Sharī'ah's view in which the discussion contributes to the body of knowledge in biosafety. The finding concludes that there is an interlinking between biosafety and Maqāṣid Sharī'ah if it does not extend beyond the allowed Islamic principles. This study suggests Maqāṣid Sharī'ah guidelines be included as part of socioeconomic considerations in regulating biosafety.

Keywords: *Biosafety law, bioethics, ethics, socio-economic issues, Maqāṣid Sharī'ah*

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Introduction

Biosafety is a concept that emphasises the necessary protection against the detrimental impact of modern biotechnological products on human health and the environment (Cartagena Protocol on Biosafety to the Biosafety Convention, 2000). Many countries have ratified and signed the Cartagena Protocol on Biosafety to the Biosafety Convention (2000), which is a foundation for numerous national biosafety laws, to safeguard biosafety. In essence, the provisions of national biosafety legislation focus on providing protocols and procedures for safe treatment, transportation, and use of living-modified organisms (LMOs) resulting from modern biotechnology which may be harmful to biodiversity also reflect the risks to humans. The national biosafety legislation regulates the movement of modified organisms both internally and across borders (LMO). The need for regulations on biosafety is to counteract irreversible damage to the environment and the future generation of LMOs. Biosafety laws also apply the precautionary principle along with science uncertainty as provided by Principle 15 of the Rio Declaration on the Environment and Development provides. The precautionary principle is to prevent damage to human health and the environment considering uncertainty in science. Principle 15 affirms that each State shall, in the event of a threat of serious or irreversible damage, apply the precautionary principle by its ability to protect the environment and shall not hinder it from taking cost-efficient measures to prevent environmental degradation in situations where there is a lack of full scientific certainty.

From the Islamic viewpoint, human health, life, and the environment are vital aspects to be protected both inner and outer fulfilment (Mohamed Saladin, Mohamed Azmil & Siti Mariam, 2020). Based on the protection of human health and life, modern biotechnology and its products, bioethics, and rulings on the food consumption of *halal* and *haram* are important. This is because the consumption of *syubhah* food could affect the heart and *ibadah* (Apap Nazihah, Bambang Samsul Arifin, 2020). As for environmental protection which is vital for future generations and sustainability, this aspect of biosafety is in line with *Maqāṣid Sharī'ah* as well. Therefore, generally, the overall concept of biosafety i.e., protection from irreversible damage of modern biotechnology on human health and environment is in line with *Maqāṣid Sharī'ah* of protecting the property, life, religion, intellect, lineage, and environment.

It is believed that Islam is not a rigid religion that adheres strictly to the old rulings and *ijtihad,* as the life of people is changing as compared to the earlier times of the Prophets and *sahaba*. While the main sources of Islamic laws such as the Noble Quran and Hadith are being referred to, other sources of Islamic laws are in line with the current emergence of science and technology, i.e., modern biotechnology for the betterment of human life. Generally, Islam does not simply reject the modernisation of science and technology as a lot of benefits could be reaped from its development. The general ruling on biosafety is that it is conditionally accepted if it does not contradict the *Maqāṣid Sharī'ah*, Islamic values, and principles. Thus, this paper tries to evaluate the current biosafety issues thus making *Maqāṣid Sharī'ah* work within its trajectory for the protection of human health and the environment.

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As most literature focus on the LMO/GMO from Islamic bioethical principles, this paper is going to discuss the *Maqāṣid Sharī'ah* general principles in line with biosafety regulation. This paper discusses in what way the biosafety rules and regulations protect or are in line with the *Maqāṣid Sharī'ah* aims.

Literature Review

Idris, Majeed, & Chang's (2020) article, provides exposure to the method of applying *Maqāṣid Sharī'ah* on bioethics in dealing with problems related to GM crops and ethical issues that are contrary to Islamic principles. This is because genetically modified organisms (GMOs) are increasingly dominating crop production and technology today. So, there is a need for efforts to deal with issues related to security to be safe from all the harmful effects that are not desired. Besides, bioethics in the field of genetics and biotechnology according to Amin et. Al (2011) that it needs accurate guidelines following the main sources of Islamic law to produce a comprehensive bioethical framework. The application of *maqāṣid al-sharī'ah* can be seen in the studies conducted by (Saifuddeen, Rahman, Isa, & Baharuddin 2014).

This article looks at the framework of a complementary bioethics model originating from Islam's perspective. The system is based on *Maqāṣid al-Sharī'ah* (purposes or goals of Islamic law) aimed at protecting and maintaining the religion, life, intellect, progeny, and property of humanity. *Maqāṣid al-Sharī'ah* is intended to be used as an initiative-taking checklist that can be used to fix bioethical problems. Bioethics involves the study of ethical questions arising from expansion; encompasses ethical issues arising from scientific developments particularly those concerning technology in the fields of biology and medicine.

Methodology

This is solely doctrinal research that engaged primary and secondary sources of law. The sources are from the books and websites available to fulfill the research aims, and objectives and answer the research questions. The primary sources are relevant statutes, regulations, case laws, and international agreements such as conventions. The main national biosafety laws namely the Malaysia Biosafety Act 2007 (Act 678), Biosafety (Approval and Notification) Regulations 2010, and the Cartagena Protocol on Biosafety i.e., following the international protocol which controls the transboundary movement of LMO and other related fields of biosafety.

The secondary sources such as textbooks, documents of countries' reports, decisions, policies, journal articles, encyclopedias, dictionaries, and other types of materials are being studied to analyse the implementation of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity and Malaysia compliance with the Protocol.

In the *Maqāṣid Sharī'ah* area, the usage of the primary sources of *Sharī'ah* namely the Noble Quran, and Hadith, religious scholars' opinions are authentic and depict the contemporary views on the legal regulation of biosafety and related areas.

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Doctrinal or theoretical legal research can be described as research that seeks what the law is in a specific area. It is concerned with analysing legal doctrine and how it has evolved and been applied. This is also referred to as pure theoretical research. It consists of either a simple search for a specific legal statement or a more complex and in-depth analysis of legal arguments (Dobinson, I., & Johns, 2007).

Discussions

Some important issues in biosafety implementation need to be understood namely the scientific biosafety risk assessment and socio-economic that implicated issues of ethical, moral, religious, and cultural. Before leaving into an in-depth debate on biosafety issues, the advantages and negative consequences of modern biotechnology products need to be comprehended first.

The Advantages of Modern Biotechnology

One of the advances of modern biotechnology is GM plants that are insect-resistant (Schuler 1988, 168) and herbicide-tolerant (Shah 1986, 478). So, if the plant is insect resistant less herbicide is to be used. GM plants which consist of better attributes of food (Nuffield 1999) can nourish the expanding populace in the world (Conway et.al 1999). The improved qualities of GM crops will be able to produce healthier food that can supply food for the world. GM plants have boosted micronutrient levels (Bouis et.al 2003, 191), the elimination of food allergens (Eliot 2003, 1317-1319), and the creation of vaccines (Nuffield 1999). The genetic modification that stretches ahead of foodstuffs for instance cotton has been altered to withstand necessary pests such as boll weevil (Shah 1986, 478). These are vital scientific innovations from modern biotechnology that could enhance human living instead of relying on the natural assets from the biological diversity that is becoming increasingly rare time by day, and consequently, in this expansion, the modern biotechnology industry should be commended.

a. **Scientific Risks of Modern Biotechnology**

On the one hand, notwithstanding the familiar advantages, there are specific products of genetically modified organisms due to modern biotechnology is also said to cause higher risks in the following ways (Sateesh 2008):

(i) genetically modified organisms (GMOs) can acclimate and increase the environment contrasted to the indigenous flora (Prakash et.al 2011). GMOs may be able to transfer genes (Prakash et.al 2011) correlated to virulence or pathogenesis (Saunders 2003) into native microbial (Farlex 2012) flora.
(ii) GMOs may produce completely new toxins and allergens (Bawa et.al 2013, 1035).
(iii) GMOs can be transferred new characteristics to the associated microbes (Sateesh, 2008).

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Thus, these organisms create situations that are volatile, inexplicable, unrestrained, and uncontrollable. Nevertheless, this is not necessarily correct as it can occur in the same way as unmodified organisms (Sateesh 2008).

Some Legal Aspects of Biosafety and Maqāṣid Sharī'ah

The key issues in biosafety regulation as mentioned above are the scientific and socio-economic considerations in the usage and the release of modern biotechnological products. Therefore, the legal and institutional setup of biosafety will be debated in the furtherance of the discussion.

Technically, when the LMOS is being imported into the country, they need to comply with some procedures namely notification for the various types of applications. Broadly speaking how the LMO is handled, transported, packaged, and identified as stated in the Malaysian Biosafety Act 2007 (Act 678) also Biosafety (Notification and Approval) Regulations 2010. Act 678 was enacted as part of Malaysian compliance towards the Cartagena Protocol on Biosafety being party to it. In this identification issues the labeling of LMOS is crucial and was gazetted by the food labelling regulation as provided by Guidelines on Labelling of Foods and Food Ingredients Obtained Through Modern Biotechnology (Regulations 11(3A), 11(6) and 11(7), Food Regulations 1985). This is performed to respond from various consumer associations such as the Muslim Association of Consumers Malaysia (PPIM), Consumers Association of Penang (CAP) and Third World Network (TWN) assert their rights as consumers to know what they are consuming the LMO products. Thus, this is in line with the *Maqāṣid Sharī'ah* for the protection of human life does not consume non-halal food, such as pork, liquor that contains urine, blood, etc. Aside from that precautionary principle due to uncertainty surrounding the science is also in keeping with the Islamic principle of *syubhah* i.e., for the human to take safeguards for things that are ambiguous.

Several risk assessments and management agreeing LMOs are to accept LMO products that are safe and acceptable in other others and not to accept food that is deemed to be hazardous in other nations. LMO food for the most part is regarded as on an equal footing with conventional food by World Health Organisation, as a substantial equivalence principle. The risk assessment procedure posts some questions that need to be answered and tests that need to be performed and assessed by the applicants, Institutional Biosafety Committee, and later by Genetic Modification Advisory Committee. When some LMO products are considered to contain some risks, thus a risk management procedure is applied to satisfy the degree of risk.

In summary, the unsettling issues in biosafety on the safety of food, socio-economic issues, and the ongoing debate on the technology also the substance used in genetic engineering technology. This occurs not just on the national level, but at the international level as well.

b. Socio-Economic, Religious, and Moral Issues

The socio-economic aspect of biosafety risk regulation is yet another aspect of legal regulation that concentrate on the socio-economic aspect of biosafety regulation. Article 26 of the Cartagena Protocol on Biosafety establishes the right of Parties to consider socio-economic considerations arising from the impact of living-modified organisms on the conservation and sustainable use of

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biodiversity, especially regarding the value of biodiversity to indigenous and local communities, in deciding on whether to import these organisms.

Consequently, some critical aspects focus on the socio-economic impact of biosafety regulation on biodiversity. Thus, some important aspects need to be examined namely the environmental impact of biosafety on biodiversity and the value of biodiversity to the indigenous and local communities. The impact of biosafety on biodiversity can be explained as follows. For example, the release of the genetically modified (GM) mosquito in the neighbourhoods of Bentong, Pahang, and Alor Gajah Melaka by Malaysia and Oxford researchers, UK (Oxitech) to lessen the death caused by dengue fever in Malaysia should be celebrated. However, the fact remains that a proper public consultation as part of the biosafety prerequisite and consent issues raised contentious issues in that area.

Another problem is the worth of biodiversity to the indigenous and local people. For instance, rice, palm oil, and rubber are primary sources of Malaysian income that produce Malaysian exports. Therefore, the local research and development work on those that main agriculture should be lauded for faster and improved yields of such products, in conjunction with a trusted risk assessment of the future GM research and development of such products.

Ethics and Bioethics

The socioeconomic problems of biosafety also turn the debate the religious, moral, ethical, and bioethics. These matters possibly have similarities and intertwined together with each other to a greater or lesser extent they are the discussion of the same issues. While the religious aspects of the Islamic *Sharī'ah* aspects have been debated as above, the cultural aspects of it according to the Islamic viewpoint are not merely the issue of halal other than other related issues as well such as the safety of those GM products in the preservation of the *Maqāṣid Sharī'ah*.

The following discussion is on the moral issues of modern biotechnology and its products as it elicits moral questions such as if human beings are creating improved products that have been better than the original or natural God-produced products, are human beings better than God? Is it morally acceptable that once humans play God in manipulating genetics consequently generating improved plants, and animals, or cloned to a different human?

The crucial ethical principles in modern biotechnology can be summed up as follows: animal rights affairs, consent issues, access to information and benefit, autonomy, ethics of technology choices and knowledge development, intellectual property rights and technology transfer, the inducement to participation, and environmental ethics.

a. Animal rights concerns

In modern biotechnology, animals are always clinically assessed for research and development before successful marketing. The procedure is substantiated by the absence of pain perception by animals, such as insects (Macer 1995, 226-235) is seen to overlook the interests of the animals and even the right of self-protection through human benefit research & innovation.

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b. Consent issues

Consent issues are especially significant in GMOs, from trial participants to society on potential environmental risks, and trial termination. For example, if some GM vectors are released near their living area, some members of society may be unable to express their concerns due to a lack of education, awareness, and knowledge, as well as social standing. As a result, their consent may be exploited. The confidentiality of data procured through trials for vaccination, for example, especially when children are involved without their parent's consent, will also be called into question (Macer 1995, 226-235). As a result, it begs the question of whether we need to ask everyone for consent if it involves a specific locality, or whether a referendum will suffice. It is critical to establish an ethics committee that considers public opinion, for example, during the release of some GM mosquitoes to improve the existing environment and local diseases.

It was also proposed that an extensive ecological understanding of the impact, extending beyond public health, be conducted. (Macer 1995, 226-235). This concept should be welcomed, especially in countries with plentiful biodiversity, to ensure long-term sustainability.

c. Access to information and benefit

Another critical issue is public freedom of information, as well as illiterate people's access to information and the perks of modern biotechnology. The positive effects of modern biotechnology should not be constrained geographically or by wealth. Alternatively, a socially dominant participant, for example, may reject any release of GM vectors in their area, abandoning others with no choice but to accept the trial in their area. As a result, the distribution of the benefits of modern biotechnology to the community is validated as part of compensatory justice (Macer 1995, 226-235).

d. Autonomy and ethics of technology choices and knowledge development

Individuals have autonomy in deciding what is good or bad depending on what they believe. Consumers of GMO LMOs should decide for themselves whether to consume GM products or not. In assisting them to choose, thus it is only ethical for them to be informed for instance for the LMOs to be labelled. This right should also be recognised and translated in the form of the implementation of GMO labelling.

In certain countries today, it appears that paternalistic interventions were made on behalf of citizens when it comes to technology choices. As a result, the government is taking the initiative to accept or reject technology on behalf of the people. Under the ethical principle of beneficence, the government should rightfully offer the people the opportunity to use new technology (Macer 1995, 226-235) if it is for the greater good, such as in agriculture and food production.

However, civil rights movements have empowered people to take these decisions themselves. In modern biotechnology, biosafety regulation at the international level, public participation seems to be part of the practice, i.e., to include the public in the biosafety decision-making process. However, to what extent their voices are effective is again questionable.

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e. Intellectual property rights (IPR) and technology transfer

Concerning moral rights in agriculture, the monopoly of some biotechnology mega corporations on GM seeds will allow producers to make enormous profits, causing concerns in developing nations that previously possessed the traditional variety of those. These are challenges that should be addressed in the prospective GM plant. It is anticipated that the countries' and producers' win-win cooperation will benefit mankind. As a result, the plant's traits improve and more food is produced for people, and the people who have traditional knowledge of the plant should be compensated or given a royalty, including such technology transfer that benefits all.

f. The inducement to participation

It is ethically suggested that the current or future benefits of modern biotechnology, as well as financial gains, should not be used as an inducement to participate (HUGO Ethics Committee 2000). However, even if there is a general distribution of benefits to the community, the possibility of compensation for an individual's time, discomfort, and expenditures (if any) should be considered. It is argued that restricting the added value to only a few tribal leaders or chiefs in the community in exchange for community consent is not in line with solidarity and should be considered a bribe. As a result, the community should receive, among other things, healthcare infrastructure, vaccines, testing, medications, or other charitable initiatives.

g. Environmental ethics

Because humans live, rely on, and use the environment, including plants, animals, and microorganisms, the environment deserves to be protected. The environment has value because, according to religion, God, as the owner, creates a world with values. Humans must use the environment to ensure its long-term viability.

Ethics of Biosafety in Islam

McGinn defines ethics as a principle that governs our discipline and procedures as well as his discussion of good and bad angles (McGinn 1991). While according to the Islamic point of view, ethics carries meaning as morals that are explained and interpreted by the Qur'an and Sunnah. Ethics and morality had been the major theme of Muslim scholars in medieval times (Rafikov et.al 2021, 17). Similarly, the ethics of biosafety in Islam refers to all Islamic teachings and guidelines on ethics or moral issues related to biotechnology or all scientific fields especially things that lead to something related to not with human life. The ethics of biosafety is one of the platforms or mediums that is considered good in Islam. It is because, in Islam, life is a gift from the bounty of Allah on His servants, so it gives an indication that this life needs to be preserved and taken care of properly. This is in line with the objective of biosafety which is intended as a precautionary measure taken to control the safety of any infection (Evans, Lipsitch, & Levinson 2015, 901-908).

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Biosafety is a law of protection for living things that must exist in the application of biotechnology. Biosafety is related to the Cartagena Protocol on Biosafety which is one of the protocols (international agreement) on biosecurity (The Cartagena Protocol on Biosafety 2000). Implementation of this legal mechanism in following all strict laboratory guidelines and regulations to focus on ecology and human health. As has been recorded in the Qur'an Surah al-Maidah as proof of the importance of human life and a soul must be taken care of and preserved:

أَنَّهُ مَنْ قَتَلَ نَفْسًا بِغَيْرِ نَفْسٍ أَوْ فَسَادٍ فِي الْأَرْضِ فَكَأَنَّمَا قَتَلَ النَّاسَ جَمِيعًا وَمَنْ أَحْيَاهَا فَكَأَنَّمَا أَحْيَا النَّاسَ جَمِيعًا

Translation: Whoever takes a life—unless as a punishment for murder or mischief in the land—it will be as if they killed all of humanity; and whoever saves a life, it will be as if they saved all of humanity

(Surah Al-Maidah 5: 32)

The application of the ethical principles of biosafety in prevention to ensure safety for the life or health of humans, animals, or plants, there are two international instruments backed by local laws made under it. Islam requires that all foodstuffs be acceptable (*halal*) and good for human consumption (*tayyib*), which is highlighted in the form of principles of prevention as enshrined in several international and national legal instruments (Ansari & Jamal 2017). This view is further evident in the article that stated the need for *Sharī'ah* principles including *dharar, maslahah, Maqāṣid* and *mashaqat* in the resolution to make decisions related to bioethics issues according to the Islamic perspective. It means that the importance of all ethics of biosafety is in line with the *Maqāṣid Sharī'ah* (Ahmad 2008).

Ethics of biosafety is a contemporary platform or issue that may not be outlined directly through the sources of Al-Quran and Sunnah, so other Islamic sources should also be consulted when compiling biosafety ethics code to achieve Sharī'ah objectives. To address new issues for example in the field of science and technology, *Maqāṣid Sharī'ah* can be used as a reference source to formulate bioethics guidelines as it is comprehensive and encompasses moral principles directly applicable to modern biotechnology (Idris et al. 2020, 1463-1476).

Among the ethics contained in bioethics used as a guide to balancing a decision are autonomy (freedom in decision-making), beneficence (doing good deeds), and justice (justice and equality (Beauchamp & Walters 2003). Even so, this western ethic is a creation of human beings with limited knowledge. Therefore, it is important here to have biosafety and legal ethics that follow the Islamic mold to monitor and control the development of modern biotechnology. Besides, referring to the study by (Sujak et al. 2011, 167-198) regarding the Islamic code of ethics for modern biotechnology, they outlined some Islamic ethical values that can be used as a principle by all parties involved in the development of science and technology.

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Among them are Caliph, Worship, Trust, Knowledge, Charity, Sharī'ah, and Justice. Thus, we can conclude that *Sharī'ah* is among the ethics that should be applied to biosafety which is responsible for laws and regulations related to the development of science and biotechnology. This is to ensure and achieve the real objective of biosafety which aims to protect the health of humans, plants and animals, the environment as well as biological diversity and reduce the risks that lead to adverse impacts with the application of *Maqāṣid Sharī'ah* which is to care of life, religion, intellect, lineage and property (The Cartagena Protocol on Biosafety 2000).

Institutional Aspect of Biosafety and *Maqāṣid Sharī'ah*

Then again, the institutional aspect that consists of the Islamic religious organizations is under doubt. Whilst the state and National fatwa provides general fatwa for the consumption of LMO goods, the functions of other Islamic-related institutions are under study. The National Bioethics Council which could offer Islamic and ethical views on bioethics and biosafety involvement is not officially set up in the organisation chart link between them and the Genetic Modification Advisory Committee (GMAC). From the National Bioethics Council, it can be observed that the IKIM members are part of the National Bioethics Committee. The official role of the National Fatwa Council, Jabatan Kemajuan Islam (JAKIM) aside from the releasing halal certificate is still to be realised in the biosafety and bioethics context.

Future of Biosafety from an Islamic Perspective

According to (Gupta, Sengupta, Prakash, & Tripathy 2016, 503-520), the era of increasing technological sophistication is now often at odds with the social system and moral value of society, so the importance of the development of biosafety and bioethics based on Islamic resources to ensure a sustainable future. This is because, from an Islamic point of view, something that is based on Sharī'ah rules, will have a positive impact on the future of generation and development. Discussions on bioethics or biosafety are inseparable from religion and must develop within the boundaries of Sharī'ah that governs activities in daily life which prioritizes human needs and wants for survival and human welfare in the world and also the hereafter (Bakar 2008).

The sustainable development of Islamic bioethics and the resulting guidelines will improve the quality of biotechnology products for the benefit of society. This is because the existence of *Sharī'ah* law is to protect and preserve human life from all aspects. This includes scientific practice, the use of appropriate equipment, and the method of processing a product in a safe environment using biosafety should follow the principles of *Maqāṣid Sharī'ah*. Islam has outlined some guidelines that need to be followed by its followers related to *halal* and *haram*, mental health, physical health, and so on.

However, the sources of the Quran and Sunnah do not specifically discuss biosafety. But it must be following the rules of both sources in general. Thus, other mediums are used as a yardstick from the Islamic point of view to determine the law on issues that will appear on biosafety in the future by using instruments for instance *fiqh*, *ijtihad*, *Maqāṣid Sharī'ah*, and others

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related to it (Kashim, Jamsari, Safiai, Adnan, & Suryani 2018, 1381-1393). The results of understanding the value of biosafety and Islamic principles can help in reducing the risk and can balance the benefits of the technology.

Conclusion

On the biosafety issues or the genetically modified organisms (GMO), it is proposed that the general guide on mufti fatwa-related biosafety must be further supported with an Islamic standard of procedure (SOP) and incorporated as a component of the checklist on the LMO approval. Such a requirement will extend beyond halal. Next is the institutional aspect thus the effectiveness of Islamic institutions such as Institut Kefahaman Islam Malaysia (IKIM) also Jabatan Kemajuan Islam Malaysia (JAKIM) seem to be part of the National of Bioethics Council should involve in the biosafety decision-making process for the benefit of Muslim consumers. Thus, as a matter of *Maqāṣid,* the role of the regulators should instill awareness and understanding in the public by educating them on the perception and consumption of LMO products.

There are some limitations to this paper. Initially, this paper examines the scientific risks and benefits of living-modified organisms to justify or explain the need for regulation in this area. This paper expands on the socioeconomic considerations issues to justify, in addition to scientific issues, the supplemental issues that must be considered to regulate this area of biosafety. This research is further supplemented by the aspect of *Maqāṣid Sharī'ah*. The paper did not delve into detail about every key issue in biosafety only some legal aspects of biosafety law in Malaysia. The future direction of this research is to examine further the legal aspects to examine if the current biosafety laws are following the *Maqāṣid Sharī'ah*. The *Maqāṣid Sharī'ah* perspective could be another aspect of socioeconomic aspects that could be investigated in the future. To accomplish this, the relevant Islamic bodies may need to develop *Maqāṣid Sharī'ah* guidelines in biosafety.

Finally, biosafety governance apart from the scientific risk assessment and management, and the socio-economic consideration, is well established with the Biosafety Act 2007 (Act 678) and Biosafety (Approval and Notification) Regulations 2010. If Malaysia could consider related socio-economic issues with *Maqāṣid Sharī'ah* as the background, due to its majority Muslim consumers, could strengthen the core values and sanctity of human health and the environment.

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